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ABSTRACT

A project developed and published a handbook for coordinators of nontraditional occupations (NTO) programs for adult women in postsecondary vocational-technical institutions and a guide for women considering NTO career options. Information about successful elements of postsecondary programs for adult women in NTOs was collected both from a literature review and from telephone interviews at the national, regional, and state levels; with programs informants had suggested; and with women completing NTO training or working in NTO jobs. The books developed were "The Nuts and Bolts of NTO," the coordinator handbook, and "Time for Change," a guide for women. Field test sites were chosen in a national competition. Monitoring procedures included a site director's monthly report, three visits by monitors, and weekly telephone conferences with site directors. Field test achievements were positive staff and student attitudes, high enrollment, and NTO program continuance with inside funds by all five field test schools. The books were revised: 1500 copies of each were printed and distributed. Two areas were recommended for future research and development: followup and NTO for men. Appendixes include summary of interviews with coordinators of 160 NTO programs, field test application questions, field test site program descriptions, and covers, title pages, and tables of contents from the two publications. (YLB)

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Development of an Outreach Program to Attract Women into Male-Intensive Vocational Education Programs

-- The Women's Outreach Project --

Contract No. 300790659

FINAL REPORT

by Jo Shuchat, Project Director

January 19, 1982

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INTRODUCTION

This submission constitutes the ninth and final report to the Office of Vocational and Adult Education, United States Department of Education, on the progress and achievements of the Women's Outreach Project. The project began on October 1, 1979, and ended on December 31, 1981. The total budget was $521,690. Technical Education Research Centers, Inc. (TERC) in Cambridge, Massachusetts, was the contractor; the subcontractor was Ellis Associates, Inc., formerly of College Park, Maryland.

The 24-month project, later extended to 27 months, had as its goal the development and publication of a handbook for coordinators of nontraditional occupations (NTO) programs for adult women in postsecondary vocational/technical institutions, and a guide for women considering NTO career options. To accomplish this, we were asked to conduct an information search, develop the handbook and guide in field test draft, test the books in a ten-month field test, and revise them based on field test findings. The culmination of the project is therefore the books, which have been published.

In this report, I will be summarizing the highlights of the project in terms of procedures and accomplishments. I have included discussions of selected project strategies in the hope that some of the elements I have been able to identify as particularly successful may be incorporated into future OVAE RFP's, as appropriate. Finally, there is a section on recommendations for OVAE sponsorship of future project work, based on what we have learned over the course of the last 27 months.

1. INFORMATION COLLECTION

The project began with a search for information about successful elements of programs for adult women in nontraditional occupations at the postsecondary level.

A thorough literature review was conducted, including an ERIC search. By and large, we found little programmatic information on NTO, although there was a fair amount of research on attitudes and background factors as well as many first-person accounts of the NTO experience. The results of the literature review convinced us that the practical information we were seeking was mostly in the heads of the people running NTO programs. It also gave us valuable background information on the labor market, especially in relation to women and work and to employment projections; the identity of people working in the areas of sex equity in education and employment; and information on relevant topics such as math and sexual harassment.

The telephone search was our most fruitful source of information. We began at the national level, calling professional associations, labor unions, federal agencies, and researchers on sex equity in education and employment. While these people had good general information to give us, their ability to refer us to specific local NTO programs was limited.

The next tier of calls was made at the regional and state levels: sex equity coordinators (the most valuable group of those we contacted), regional Women's Bureau (U. S. Department of Labor) offices, Commissions on the Status of Women, Apprenticeship Information Centers, and others. This tier was deliberately broad: we decided that since we were looking for best practice and not conducting a comprehensive survey, our net should be wide enough to include NTO programs of all types: educational institutions, CETA, employer-sponsored programs, union programs, nonprofit organizations, and any other kinds we could find. The people in this tier were generally well able to give us the names and telephone numbers of NTO programs in their areas. In the interests of efficiency, project staff members were assigned specific states to cover. Ellis Associates was responsible for the southern half of the country, while TERC was responsible for the northern half. This arrangement worked quite well.

The third tier consisted of interviews with the coordinators of NTO programs which informants had suggested. Interviews were lengthy, consisting

of questions on what worked and what didn't -- and why -- from outreach to followup, including planning and evaluation. A total of 166 programs were interviewed by telephone, representing all states but one. (A summary of the interview totals is included as Attachment A.) The entire telephone search phase of the project lasted about three months.

In addition to these interviews, the information from which constituted the major part of the handbook, project staff also interviewed 85 women who were completing NTO training or working in NTO jobs. These people were recommended by program coordinators when we asked for names of women who would be good interview subjects and who could tell us about positive and negative aspects of the NTO experience. Many of the NTO women's observations and comments were later incorporated into the guide and the last chapter of the handbook.

The strategy of information collection by telephone was critical to the project's overall success. Because few NTO program coordinators were at that time writing about what they knew, it was essential to contact them directly for information. Early on, we decided that we needed to talk to coordinators in every state in the country -- primarily for credibility reasons, since we could perhaps have learned enough from 50 or 75 interviews rather than the 166 we conducted. This turned out to be wise, as the nationwide scope of our information collection was definitely a selling point later in the project. Telephone interviews, while costly compared to the usual telephone budget, enabled us to achieve the necessary national coverage in a way that would have been prohibitively expensive (in fact, impossible) with site visits. I have no doubt that without our ability to interview directors of NTO programs in all fifty states at length, we could not have compiled the breadth of information or built the large consituency we ultimately achieved. The telephone interviews made the Women's Outreach Project known to sex equity coordinators and other sex equity professionals as well as NTO program practitioners all over the country. It was money well spent.

2. DEVELOPMENT OF THE BOOKS

Given the quantity and complexity of the information we had collected from the literature review and especially the telephone search, our challenge here was really one of organizing it all into a coherent, usable draft.

We named the handbook for coordinators The Nuts and Bolts of NTO. Mirroring our interviews, it presented guidelines on establishing NTO programs in a chronological order, from planning through followup. The book drew almost entirely on the interviews we had conducted with NTO program coordinators across the country, since, as I have said, this information was not available anywhere else. Notable exceptions were those areas coordinators weren't able to tell us enough about: evaluation in general and followup in particular. Not only was the information here weak, but it led to weakness in other areas having to do with problems some NTO women experience on the job: tokenism, sexual harassment, discriminatory raises and promotions, etc. However, we heard enough to suspect that these problems might be more widespread than many individual coordinators realized from their spotty and underemphasized followup. We filled these gaps by going to the literature.

You may be interested in how we accomplished the task of organizing all this information. Each staff member went through her interviews and recorded respondents' comments, often in the form of quotations, by subject areas we had standardized in advance. Each person produced, for example, ten full pages on math, eight pages on administrative support, and so forth. When completed, the notes amounted to more than three hundred typed pages, and were grouped into broad subject areas (planning, outreach, etc.) Feeling that I needed absolute quiet and a total lack of distraction to transform the raw data into an outline for the field test draft of Nuts and Bolts, I checked into a hotel for three days and worked as continuously as possible in order to keep as much of the information as I could in my head. I don't think I could have achieved the firm conceptual grasp of the material that was required for subsequent phases of the project in any other way. I recommend the hotel strategy for future project staff facing similar tasks.

Time for a Change, the guide for women, was the subcontractor's responsibility. This book relied on the notes we all took when we interviewed the 85 NTO women especially for the sections on the qualitative, personal experience of NTO and on the rewards and barriers associated with nontraditional jobs. Information obtained from the literature review figured heavily in the sections on job descriptions (and indeed guided us in selecting the occupations to feature) and occupational sex stereotyping.

The books were typed in a space-and-a-half format and reproduced single-sided in order to encourage note-taking on the text during the field test. As it turned out, few site directors during the field test chose to comment on the books by writing directly on the pages. Future directors of projects that field-test written materials might do better to save the trees.

3. FIELD TEST SITE SELECTION

Instead of the usual way of obtaining field test sites -- contacting likely prospects and concluding the match after lengthy mutual exploration -- we decided to hold a national competition for field test site "membership". We were no doubt aided by the fact that the project included funds to pay $13,600 in salary to each site director for the ten months of the field test.

We sent the application questions we prepared to:

- Sex equity coordinators
- State directors of vocational education
- Women's Bureau (U. S. Department of Labor) regional and national offices
- Advisory committee members
- Groups that had previously expressed interest in applying

Each recipient was asked to duplicate copies of the application guidelines and forward them to anyone in their areas who might be interested in testing Nuts and Bolts and Time for a Change for ten months in a new NTO program. Although we suspected that state directors of vocational education would route the guidelines directly to their sex equity coordinators (and most did just that), we sent the guidelines to them anyway for "consciousness raising" purposes. We did this with several mass mailings during the project: state directors learned about the Women's Outreach Project in this way.

We achieved very wide coverage by the referral strategy. In some states, hundreds of duplicated copies were sent to schools and organizations. Each recipient to whom we sent the guidelines plus many hundreds who received copies all became informed of nontraditional occupations for women -- many, we are sure, for the first time.

The results were pleasing. We received 32 applications from schools, non-profit organizations, and government agencies offering to test the books by using them in new NTO programs. Each of the ten federal regions was represented by at least one application. In addition, we received telephone inquiries from at least double this number of people who subsequently

decided not to apply. (We discouraged some from applying, such as the community college in a summer resort area where most year-round inhabitants went on unemployment for the winter!) Nevertheless, the process started even these people thinking about NTO: it was far from a loss. I'm not sure whether the application strategy would work quite as well without the financial sweetener we had, but I recommend that others try it.

The application guidelines themselves turned out to be good but not quite good enough. We requested answers to 15 questions relating to the community, tentative plans for the NTO program, and reasons for applying. (The questions are included as Attachment B.) Upon reading the applications we received, we saw that many applicants apparently assumed that an NTO program was merely a collection of outreach activities intended to boost enrollment, with few or no support services contemplated after this point. (Among ourselves, we called this the "loudspeaker model" of NTO programming.) We therefore asked the 11 most promising applicants to submit answers to four additional questions, which can also be found in Attachment B.

Although it would have been more efficient for us to have obtained all the information we needed from applicants in one round, and would have been more helpful to applicants to have had better targeted questions from the beginning, we did feel that the process gave us the information we needed and helped all applicants begin to plan for an NTO program, whether or not they were chosen for the field test.

With the assistance of the Advisory Committee, we selected six applicants as field test sites, subject to the site visits described below. The six were chosen to represent diversity in:

- Geographical location
- Urban, suburban, or rural characteristics
- Experience with special programs for women students.

As required, half of the sites were in labor surplus areas. Our primary criterion, however, was that the applicant demonstrated evidence that the program could succeed, based on administrative commitment, organizational capability, operational support, and a reasonably clear understanding of what an NTO program might entail. The six sites we chose were:

- Altoona Area Voc-Tech School, Altoona, PA
- Northern Essex Community College, Haverhill, MA

- Portland Community College, Portland, OR
- Prairie View A & M University, Prairie View, TX
- Trident Technical College, Charleston, SC
- Waukesha County Technical Institute, Pewaukee, WI

We also chose two alternate sites in the event that one of the six didn't work out:

- Broward Community College, Fort Lauderdale, FL
- New Directions for Women, Baltimore, MD

Mary Ellis and I immediately set out on a round of visits to each of the six tentatively accepted sites. We visited each one for two days, speaking to everyone who might be involved in the NTO program: administrators, counselors, instructors, students, staff. At some sites, local advisory committees and area employers met with us, as per our request. In this way, we were able to gauge very accurately a site's ability to establish a successful NTO program. It was exhausting, but invaluable. If directors of future field test projects have the stamina for this method of selecting sites, they'll be making the most reliable choices possible.

As a result of our visit to Portland Community College, we decided to substitute an alternate (Broward Community College). Our conversations with administrators and staff at Portland led us to believe that, although they would probably create a good NTO program, we might not get the information we needed for revising the books after the field test.

The two-day visit strategy was not foolproof. Prairie View A & M University had to be dropped as a field test site when so much time passed in efforts to conclude a field test agreement with the administration that there was no longer enough time for the field test itself. This resulted in a reduction in the number of sites from six to five, since a substitute site could not be geared up quickly enough for the relatively short field test. I have thought a great deal about whether we should have foreseen the failure with Prairie View, and have concluded that we really couldn't have been sure. Because Prairie View was our most rural site, our westernmost site, and our only predominantly black site, we chose to delay substituting an alternate in the hope an agreement could be worked out in time. It was a gamble we lost.

However, we made an error that should have been avoided. We did not allow enough time for field test sites to hire program coordinators. We had thought they could begin the selection process as soon as their tentative acceptance came through, allowing us to interview candidates for the job

when we visited each school. Of the four sites that hired coordinators from outside, some could not post the opening until after the final acceptance at the conclusion of our visit in April or May, and others found that the entire posting-interviewing-hiring process just took longer than the earliest posting date allowed. As a result, the beginning of the field test was delayed from one to six weeks at three sites. I would recommend that future field test project directors allow a full three months, rather than the seven weeks we did, for this process.

4. FIELD TEST MONITORING

I highly recommend the monitoring procedures we followed: they provided us with in-depth and comprehensive information about the progress of the field test NTO programs while posing a minimum burden on site directors.

About six weeks after the field test officially began, we held a meeting of staff and site directors. We spent two days getting to know each other, sharing program plans and strategies, and working out and agreeing upon monitoring procedures. This worked out well: we standardized what we needed to standardize, the enthusiasm and commitment of the directors were strengthened, and directors learned from each other and thereby strengthened their programs.

Each site was assigned a staff member as monitor throughout the field test. This created a personal relationship between site director and monitor that allowed us to obtain excellent information and provide maximum assistance.

Site directors were asked to submit a written report once a month, summarizing progress and problems, reviewing one or more chapters of Nuts and Bolts, and including materials such as recruitment brochures or newspaper articles. The submission of materials was very valuable, as some of these were used in the final version of Nuts and Bolts. Time for a Change was reviewed by NTO women at each site; directors forwarded their reviews to us.

Monitors visited each site three times over the ten months, using the opportunity to talk at length with the site director, administrators, instructors, counselors, and NTO women students. We obtained excellent information in this manner.

Our most fruitful monitoring strategy, however, was a weekly telephone conference with site directors. Each monitor and director arranged a set time every week, and reviewed the week's events in detail over the telephone. Monitors took lengthy notes on the conversations, sparing site directors the

burden of spending a lot of time writing reports. Directors were only asked to jot down notes to themselves during the week on what to discuss with us. Even this was often not necessary, as the information was fresh in their minds. I cannot recommend this strategy highly enough.

All notes taken by monitors during the weekly telephone conferences and the site visits, as well as the reports submitted by site directors each month, were circulated among the project staff members. All of us were therefore well informed of the progress at each field test site. If a problem arose with a site, we could all discuss it knowledgeably enough to assist its monitor.

As we expected, the NTO programs developed at each site differed considerably. Attachment C contains the summary of the field test programs we prepared for Nuts and Bolts.

I would like to reflect here on the overall achievements of the field test, which was for the most part a remarkable success as measured in four ways.

First, administrators, staff, students, and site directors were unanimously positive and enthusiastic about the value and impact of the NTO programs at their schools. In some cases, we watched as the attitudes of administrators and staff evolved from initial skepticism (rarely outright hostility) to one of commitment and support.

Second, the enrollment and retention results far surpassed our expectations. Based on our original interviews with NTO programs located in educational institutions, we knew that a first-year NTO program would do well to enroll ten women on the average, and retain most of them. Twenty women would be an excellent achievement. We therefore hoped that across five sites, 100 women would enroll and remain in male-intensive occupational programs. In fact, a total of 372 women enrolled in NTO training; the few dropouts were generally due to personal factors such as illness, compelling financial need to work, or similar reasons.

Third, one of our field test sites received state, regional, and national awards for its NTO program. Altoona Area Voc-Tech School's program was judged the best program for women in the state by Pennsylvania and in Region III by the U. S. Department of Education. It received a U. S. Secretary of Education Certificate of Recognition as an exemplary vocational program, the only women's program to be chosen and one of only three to be nominated

in the country. Had the other sites applied for similar awards, the list of plaudits might be even longer.

In my view, the last measure of success of the field test is the most impressive. All five field-test schools independently and voluntarily chose to rehire their site directors to continue the NTO program with inside funds after federal support ended in March 1981. Altoona's CETA prime sponsor enthusiastically refunded its NTO program. Especially in a time of shrinking resources and a political climate in which Affirmative Action and progress for women are increasingly de-emphasized, this development represents the most eloquent testimony to the value of the NTO effort.

Despite these triumphs, there were a couple of problems with the field test. Running from June 1980 to March 1981 (ten months), a period that included planning time, the field test was too short for us to obtain placement and followup results. The only exception was the Altoona site, which, since it was a self-contained, CETA-funded intensive training program, achieved placements shortly after the field test ended. At the other four sites, most of the women had not even completed their first year of courses when we had to begin revising the books. In future projects involving a field test in vocational programs, I suggest that more time be allotted, perhaps at a reduced effort level during the field test itself, in order to permit placement and followup as well as enrollment and retention outcomes.

The second problem is inherent in a field test conducted at a school but monitored by an outside organization: with two "bosses", the site director can have loyalty conflicts. We paid the site directors' salaries (although most schools contributed operating costs, fringe benefits, and in some cases additional salary), but they reported to supervisors at the schools. We decided early on to minimize potential loyalty conflict problems by serving in an advisory rather than supervisory capactiy. This approach was necessary because a valid field test required that schools be free to interpret, accept, or reject guidelines in Nuts and Bolts as they thought appropriate for them.

For the most part, the advisory approach worked. Site directors created programs that responded well to women's needs for support services during training as well as targeted outreach and career exploration activities. At one site, however, we became concerned that recruitment was apparently receiving too much emphasis at the expense of support services. The monitor and I spent a lot of time discussing the situation with the site director

and made a special visit to the school to discuss the situation. Although somewhat more attention was paid to support services thereafter, I can't say that I was entirely satisfied with the outcome.

Considering the situation now with the value of hindsight and comparing the plusses and the minuses, I think that the difficulty in controlling site directors' decisions and therefore the shape of their NTO programs was a necessary price to pay given the objective of the field test: to determine the usefulness of The Nuts and Bolts of NTO and Time for a Change in creating quality NTO programs. By forcing site directors to create programs according to our instructions, we would have undermined this objective. The fact that the other four sites were able to establish comprehensive programs without special directions from us led us to conclude that the books were indeed effective. Even the last site achieved significant NTO progress that would not have happened without the books to guide them. You may want to look at the definition of an NTO program on page 2 and at pages 25 to 27 of Nuts and Bolts in light of the preceding discussion: we could not have made the distinctions among basic, comprehensive, and ideal NTO programs, terms we coined for the purpose, without this experience to reflect upon.

5. REVISION AND PUBLICATION OF THE BOOKS

The revision process took so much longer than we planned that we were forced to seek a three-month extension, which was approved. The reason was the magnitude of feedback we had accumulated over the duration of the field test. In addition to the monitoring information described above, we had the recommendations of approximately thirty people (Advisory Committee members, site directors, school staff, and NTO students) who attended the two-day Revision Meeting at the end of the field test, plus annotated volumes by a panel of reviewers (ten for Nuts and Bolts, ten for Time for a Change), plus materials we had acquired for our library. Needless to say, there were a fair number of contradictions among them. All suggestions were carefully considered, and the books were revised according to major recommendations.

Since we didn't have money for typesetting, we decided to lighten the layout of Nuts and Bolts by producing it on TERC's word processor, which offers greater design flexibility than a typewriter. Time for a Change was produced by Ellis Associates in typescript, with the addition of a number of illustrations which made the pages quite attractive. The covers continued

the same blue denim motif we had used in our first informational brochure. The cover, title page, and table of contents of each book are included as Attachment D.

Fifteen hundred copies of each book were printed through the Government Printing Office and distributed free of charge to sex equity coordinators, state directors of vocational education, Department of Labor Women's Bureau offices, field test sites, Advisory Committee members, NTO programs originally interviewed, curriculum centers, the National Center for Research on Vocational Education, the media, researchers, OVAE, and others. TERC has assumed the responsibility for continuing promotion, printing, and distribution of the books, as we are experienced in national promotion and marketing of educational materials we have produced. This effort is underway now: we have begun to receive orders from across the country for books we have printed and are selling on a cost-recovery basis.

6. THE INFORMATIONAL AND PROMOTIONAL CAMPAIGN

I am delighted to be able to write about the informational and promotional campaign in this report (despite its awkward phrasing!). This aspect of the project was perhaps the most creative, far-reaching, and cost-effective one of all. I recommend it MOST HIGHLY in future projects.

We were asked to promote the project by producing an initial introductory brochure, to be followed toward the end by a brochure announcing the publication of the books. The effectiveness of these brochures was aided immensely by obtaining the services of a talented professional designer. Many, many times people mentioned remembering the project by referring to "that beautiful blue brochure". You might consider specifying "professional designed and typeset" the next time you call for the development of a brochure in an RFP.

I especially want to compliment and thank the writer of the Women's Outreach Project RFP for including a requirement for "informational activities, such as the preparation and production of articles in appropriate publications, presentations to groups, and correspondence...". Because of this requirement and the budget that accompanied it, we were able to inform people nationally about the project and educate them about the desirability of nontraditional occupations for women. Through presentations, meetings, brochures, letters, and articles, and telephone calls, we reached thousands of people — and I'm sure more thousands through them — who thus learned about NTO and wanted to purchase Nuts and Bolts and Time for a Change when they were published.

Towards the middle of the field test, we began to distribute book request forms at every meeting and presentation; by the end of the project we had well over a thousand individual letters and forms requesting a publication announcement. Many of the latter were copies of copies of copies, from the looks of them.

In terms of numbers, we distributed nearly all of the 10,000 informational brochures printed near the beginning of the project. We have distributed so far approximately 20,000 publication brochures (10,000 of which were paid for from contract funds, as per requirement; TERC had 50,000 additional brochures printed, which we will disseminate over the next few months). Staff members attended nine major conferences and meetings around the country and many more smaller ones; at each we spoke to people about the project and distributed brochures. Among us, we gave twenty-six presentations -- workshops, conferences, seminars, colloquia, technical assistance sessions, radio and television interviews, and keynote addresses -- for vocational educators, employers, vocational counselors, CETA staff, researchers, and state and federal agency officials. During the past quarter, for example, I attended the annual meeting of the American Vocational Association, gave a workshop at a conference on nontraditional students for the Two-Year College Development Center at SUNY-Albany, gave a workshop at the New York State Sex Equity Conference, and testified before the Congressional Subcommittee on Elementary, Secondary, and Vocational Education on NTO for women in relation to the sex equity provisions of the Vocational Education Act.

I feel that the goals of the project and OVAE were well served by enabling these activities to take place. Requiring contractors to undertake an informational and promotional campaign is an excellent strategy, and I urge you to include it in other RFP's in the future -- with one modification.

The modification I added was to ask people who requested presentations to provide travel and per diem expenses. Our time was of course provided free of charge, since it was covered by the Women's Outreach Project. This approach has two advantages: it stretched the funds available, enabling us to reach more people through more presentations; and I think it made the requesters value the service we provided more highly. Because they paid something for it, they were more inclined to publicize it and to take it seriously. Naturally, the project paid travel and per diem costs in cases

where requesters could not, so no one was turned down on financial grounds. You may want to consider building this into the next informational and promotional campaign you call for.

7. PROJECT MANAGEMENT

As there was some concern expressed by OVAE about how the project could be managed smoothly with the contractor in Massachusetts and the subcontractor in Maryland, I thought I'd add a word on the subject here.

It worked out very well. We had five in-person staff meetings during the project, starting with a five-day planning marathon at the beginning. This meeting and one other to prepare the field test guidelines were actually the only ones for which the project had to pay extra: the remaining three staff meetings were held before or after Advisory Committee meetings in Washington, enabling us to use these travel funds for a dual purpose.

Our need for close communication was greatest during the first year of the project: the information search, development of the books, field test preparation, and the beginning of the field test. This was managed easily by arranging a set time each week for a staff conference by telephone. We achieved conference calls with direct-dial rates by using six extensions in all. During the week, each half of us made a list of subjects we needed to discuss, which effectively became the conference agenda. If an issue or problem arose during the week which anyone felt should not wait for Friday, we of course called immediately.

Once the field test was well underway, we found there was no longer a need for weekly conference calls. Each site monitor was distributing to the rest of the staff her notes on the telephone conferences she held each week with site directors and the site visits she made, as well as director's monthly written reports. In most cases, keeping informed of the other organization's progress was all we needed. Telephone and mail took care of the rest. I was in Washington a number of times once the field test started, and used these opportunities for impromptu staff meetings.

I recommend the system of weekly telephone conferences, based on agendas prepared by each half prior to the call, as an effective means of maintaining communication and smooth project managment when two organizations in different cities are collaborating closely on a project.

8. RECOMMENDATIONS FOR FUTURE WORK

Based on what we have learned in the Women's Outreach Project, there are two major areas that very much need research and development.

Followup

A project on followup is, in my view, critically needed, and by more segments of vocational education than NTO programs alone.

As I mentioned earlier, followup -- and evaluation in general -- was the weakest link we identified in our interviews. The field test, moreover, was too short for us to look at this aspect of an NTO program for ourselves.

The weakness is understandable. NTO programs are generally staffed by only one person, whose hands are full with outreach and support service activities. Coordinators don't have time to conduct thorough followup, nor do they have funds to hire someone else to do it. As a result, followup is usually carried out in two partial and unsatisfactory ways.

In the first, graduates are asked to keep in touch with the coordinator by dropping in or attending periodic reunions. Many coordinators we interviewed told us they suspected that NTO women who were having job troubles such as sexual harassment, ostracism, double-standard problems, and the like, were not keeping in touch as much as others who had good news to report. Perhaps the women who were having a rough time of it felt ashamed of "failing" or "letting the coordinator down". Whatever the reason, coordinators often don't learn enough about the job problems NTO women can meet. As a result, they are unable to provide help to these women -- via counseling, workshops, referrals, conferences with employers and coworkers, or any other method -- and unable to prepare currently enrolled women to deal with the problems should they occur.

The second way NTO followup is now carried out is through the school's placement or evaluation office, which sends a followup form to all of the school's graduates. Typically, general questions required for VEDS data are asked: salary, employer, position, recent promotions, whether the job is in the same occupational area as the graduate's training, whether the graduate is satisfied with the training received, etc. None of these questions addresses problems specific to NTO women. If, for example, hostile coworkers make it impossible for a woman to perform her job well and she is

fired for poor performance, no question on the all-purpose form would elicit this information. In effect, the form assumes that only job skills are relevant to subsequent employment outcomes. This is simply not true for NTO women. We have heard many times of women whose job skills were more than adequate, but were fired or forced to quit over situations amounting to sabotage due to their status as NTO women. It probably doesn't occur frequently, but then again no one knows for sure how frequently it occurs.

It must be a problem that affects far more people than NTO women. Any time a member of a minority group is trained and takes a job where most of the employers, supervisors, and coworkers are members of the majority, the same difficulty can arise. Racial and ethnic minorities, the handicapped, people for whom English is a second language, the mature worker, displaced homemakers, re-entry women, teenage workers, the educationally and/or economically disadvantaged: all these groups potentially face difficulties on the job that are related to their minority status as opposed to their job skills. Normal followup, which addresses only job skills, is incapable of finding out about and remedying minority-status problems. By assuming that all vocational/technical graduates are the same, we cut these special groups off to sink or swim after they leave school. In the case of NTO women, Chapter 7 of Nuts and Bolts about dealing with opposition (particularly the discussion of tokenism problems on page 109) contains ample evidence of how easy it can be for unprepared or even prepared NTO graduates to sink.

This problem is just as serious for employers. In the best of circumstances, new hires are expensive. Recruitment and hiring procedures cost money. So does the formal and informal on-the-job training every new employee requires to some extent. The productivity of the new employee is relatively low until he or she gets used to the tasks and the environment.

When on top of this we add the element of opposition to a new employee on the basis of his or her minority status, we have additional expenses. The stress causes lowered morale among coworkers and supervisors, which in turn decreases their productivity. Employers pay more for medical coverage due to the stress-related ailments of harassed employee. If a lawsuit is brought, legal fees are high. If the employees quit or are fired, unemployment compensation and replacement costs add up.

For these reasons, the active participation of the private sector is essential in any project designed to improve followup in vocational/technical

schools. We owe employers and our graduates more than we are providing. If the promise of vocational education is to prepare people for productive employment, we must not give with one hand what we take away with the other. I urge you in strongest possible terms to issue an RFP that deals with the followup problem.

NTO for Men

It is understandable that NTO has focused on women. Occupational segregation, discrimination in hiring, pay, and promotion; and the economically disadvantaged position of re-entry women all contribute to the well-known fact that women earn 59% of what men earn. Their need for better-paying jobs on which to support themselves and their families is pressing and immediate. Nontraditional occupations represent the most promising route out of poverty for the vast majority of women who cannot for economic or educational reasons obtain professional training.

OVAE responded to women's obvious needs by issuing the RFP for the Women's Outreach Project in 1979. It should now turn to NTO for men as an activity mandated by the Vocational Education Act, as a moral obligation, and as a response to burgeoning labor shortages in traditionally female service and clerical occupations.

There has been almost nothing done on NTO for men -- far less than we found on NTO for women when we started the Women's Outreach Project over two years ago. Many sex equity coordinators have asked us for information and resources on NTO for men, and we have had nothing to give them. At sex equity conferences, one sees hundreds of publications on sex equity for women and perhaps two or three for men. To the best of my knowledge, there are at the present time no professionally developed materials that vocational educators can use to increase the enrollment, retention, and job success of men in health occupations, home economics, and clerical jobs.

We know very little about the whole subject. Given occupational segregation and its correlate, pay inequity, men obviously cannot be attracted to female-intensive occupations for their high pay. We're not sure what factors would appeal to them. A desire to nurture? An arena for interpersonal contact and the expression of emotion? The possibility of part-time or temporary employment? We don't know, and we should find out. We should

also find out what services men need to succeed in traditionally female training and jobs. The lessons learned about NTO for women in the Women's Outreach Project are not completely transferable to NTO for men. Strategies such as outreach based on publicity about jobs with high pay or hands-on tryouts in shops and labs are clearly inapplicable. Other strategies, such as career exploration seminars and role models, may be more relevant.

Employment projections for the next decade make NTO for men a smart thing to do. The demand for secretaries is expected to increase by about 50% over the 1980 level. Allied health personnel will be in similar short supply. For the continued viability and expansion of existing businesses (including hospitals and medical centers) and the creation of new ones, we must recruit and train new groups of employees for these jobs. Women, our traditional group, will not be able to fill the gap.

If we are committed to a reduction of occupational segregation in training and jobs, and to the development of a work force with skills needed by the private and public sectors, then we should make it possible for men as well as women to cross the line that divides the work world into male and female domains. To this end, an RFP on NTO for men is timely and very much needed.

CONCLUSION

I would like to express my gratitude for an extremely well designed RFP and a budget that was adequate to accomplish the ambitious goals of the project. (As far as the budget is concerned, skinflint financial management prevented inflation from making a shambles of our resources -- that, and the availability of an additional $10,000 toward the end when even skinflintness was no longer enough to stretch our funds.)

I am grateful for the excellent monitoring and assistance we received from our Project Officers. While it would have been nice to have had only one to work with throughout the 27 months of the project, Frances Hamilton, Pariece Wilkins, and especially Richard DiCola were thorough, conscientious, and helpful. Our Contract Officers, particularly Carol O'Leary, were very good about advising me on the format necessary for the several contract modifications we submitted, and about expediting them through the approval process. I am sure that one of the elements of the project's success was OVAE's active partnership in the venture.

Finally, and speaking personally now, I am grateful for the privilege of participating in a project that was intellectually exciting and morally fulfilling. Most immediately, three hundred and seventy-two women in our field test schools are now embarked upon careers that will permit them financial self-sufficiency and job satisfaction, many for the first time in their lives. As The Nuts and Bolts of NTO and Time for a Change are promoted and distributed throughout the country, many more women than these will have the same opportunity. It is a real and important contribution we have made. Thank you so much for having made it possible.

ATTACHMENT A

Summary of Interviews Conducted with the

Coordinators of 166 NTO Programs

TERC Technical Education Research Centers

8 Eliot Street, Cambridge, Massachusetts 02138 Telephone 617-547-3890

March, 1980

THE WOMEN'S OUTREACH PROJECT

Summary of interviews conducted with the coordinators of nontraditional occupations (NTO) programs for women, November 1979 - February 1980. Programs were found in all states but one.

SPONSORING ORGANIZATIONS

	Number	Percent of total
Nonprofit organizations	63	38.0%
Educational institutions*	54	32.5%
Unions	20	12.0%
Business and industry	13	7.8%
Government, all levels	13	7.8%
Joint industry and union	2	1.2%
Joint voc ed* and union	1	0.6%
Totals:	166	99.9% due to rounding

FUNDING SOURCES

	Single source		Partial source	
	#	% of 166	#	% of 166
CETA	70	42.2%	19	11.4%
Voc ed*	27	16.2%	16	9.6%
DOL	17	10.2%	1	0.6%
Industry	10	6.0%	5	3.0%
Union	3	1.8%	3	1.8%
Government, federal	1	0.6%	-	-
Government, state	6	3.6%	1	0.6%
Government, county	2	1.2%	1	0.6%
Government, local	2	1.2%	2	1.2%
Foundation	-	-	4	2.4%
College	1	0.6%	1	0.6%
Other	1	0.6%	2	1.2%
Totals:	140	84.3%		

* Public postsecondary educational institutions offering vocational programs at the sub-baccalaureate level.

... CONTINUED ...

FUNDING OF NTO PROGRAMS
AT EDUCATIONAL INSTITUTIONS

	Number	Percent of 54
Voc ed funds only	26	48.1%
CETA funds only	12	22.2%
Joint voc ed and CETA funds	7	13.0%
Joint voc ed and other funds	3	5.6%
Other non-voc ed funds	6	11.1%
Totals:	54	100.0%

ATTACHMENT B

Field Test Application Questions

FIELD TEST GUIDELINES

FIRST ROUND OF QUESTIONS

A. Your community

1. Please describe your community in terms of:

   a. Urban, suburban, or rural characteristics
   b. Whether you are a labor surplus area
   c. Ethnic and racial groups to be served by your program

2. Please describe any significant efforts in your community to improve women's access to nontraditional training and employment, and the results of these efforts, if known.

3. Please indicate your reasons for believing that nontraditional jobs for qualified women are available in your area.

4. Please indicate your reasons for believing that women in your community will take advantage of women's program.

5. What networks or linkages are you a part of?

B. Your women's program

1. Please describe your organization and its activities.

2. Please describe briefly the nature of the women's program you would like to establish.

3. Please provide evidence of commitment to the program from the top administrator of your organization.

4. Please furnish evidence that your organization will support other staff needed for the program, other than a director.

5. Please describe the facilities and resources available to the program.

6. Please describe support services available to the program.

7. Will you be able to identify at least two nominees for the position of site director by mid-April?

8. Federal project support for field test sites will end in March 1981. Please describe what is likely to happen to your women's program beyond this date.

C. In summary

1. Why is your organization interested in serving as a field test site?

2. How will your participation result in a constructive contribution to the handbook and the guide?

SECOND ROUND OF QUESTIONS

1. Please describe your proposed program in detail.

2. What steps will you take to get women enrolled in occupational training programs?

3. What steps will you take to get early and regular feedback from the women on how your project is working? How will you use this feedback?

4. What adjustments do you foresee in the services normally provided by your institution to enable women to succeed in NTO? What steps will you take to achieve these adjustments?

ATTACHMENT C

Field Test Site Program Descriptions

Appendix A

DESCRIPTION OF THE FIELD TEST NTO PROGRAMS

ALTOONA AREA VOCATIONAL-TECHNICAL SCHOOL

1500 4th Avenue
Altoona, Pennsylvania 16603
814/946-8455
Robert Walker, Site Director
Edith Walker, Administrative Director

This school provides vocational education to high school students and adults. Altoona's was the only field test program to be supported by CETA funds, and it began a little earlier and ended a little later than our formal field test. Staff consisted of the site director, five instructors for the exploratory phase, and one counselor. One hundred women were screened, 60 were selected for training, 44 completed the program, and 18 were placed in NTO jobs within three months in an area with a 12% unemployment rate. Stipends were paid to trainees. Personal counseling was provided throughout the program.

* Phase I, five weeks: The exploratory period, with women spending a week in the shops and labs of each of five broad occupational clusters.

* Phase II, one month: Occupational counseling, refresher math, blueprint reading, physical fitness, and women's issues.

* Phase III, four months: Intensive training in each woman's chosen occupational area, with continued occupational and personal counseling.

* Phase IV, two weeks: Observation and participation in local industry.

* Phase V, three and a half months: Intensive occupational training, followed by placement.

The CETA prime sponsor has refunded the program for another cycle. The Altoona Women's Outreach Project has been selected by the State of Pennsylvania and the Region III Office of the U.S. Department of Education as the best in their respective areas to prepare women for nontraditional employment. The program is one of three nationally nominated for the U.S. Secretary of Education Award of Recognition as an exemplary vocational program, the only women's program to be nominated.

BROWARD COMMUNITY COLLEGE

225 East Las Olas Boulevard
Fort Lauderdale, Florida 33301
305/475-6500
Leslie Delman, Site Director

This school has three campuses and a fourth administrative building located throughout the county, making logistics for the schoolwide NTO program a challenge. The program concentrated on enrolling women in electronics, computers, engineering, aviation, and transportation, since these were identified as male-intensive and

leading to high-demand jobs as determined by a preliminary job market survey conducted by the site director.

One focus of the program was on-campus enrollment. The site director used publicity aggressively: newspaper, radio, television, and frequent speaking engagements. She organized a five-part career exploration workshop, where four sessions were conducted by instructors and role models in the evening's occupational area, and the fifth was on women's issues in relation to nontraditional employment. Over 150 women signed up for the non-credit course, making it the most popular ever sponsored by BCC's Women's Centers. Using these methods and extensive individual counseling by the site director, 160 women enrolled in NTO training. Support services on math anxiety, stress, and assertiveness were available through the Women's Centers. The site director worked with instructors individually to create awareness of women's instructional needs. The NTO program is now integrated into the Women's Center services on each of the campuses.

The other focus was arranging upgrading courses with local employers for current employees in low-level jobs, most of whom were women. Targeting companies with a shortage of skilled technical workers, the site director organized company-paid electronics and data processing courses with four employers. The courses were taught by BCC instructors at the companies. In doing so, she pioneered an innovation: bringing the registration process to the company rather than the more traditional method of bringing the students to the registration office. Sixty women enrolled in these upgrading courses.

NORTHERN ESSEX COMMUNITY COLLEGE
100 Elliott Street
Haverhill, Massachusetts 01830
617/374-0721
Mary Jane Gillespie, Site Director

Much of the effort of this field test program was directed toward increasing women's awareness of nontraditional occupation options, with a focus on careers in electronics and computers to meet the labor needs of the numerous high technology companies in the area. The site director organized panels of role models, industry tours, open house events, and an eight-session non-credit course on technical careers and technical writing. Much use was made of print media, including newspapers and an illustrated newsletter written by the site director. The NTO programs enrolled 39 women in electronics and computer occupational programs.

The site director conducted an informational workshop for faculty and staff early in the field test, and out of this workshop came the impetus for an on-campus coordinating committee, chaired by the site director, with counselors, instructors, and administrators as members. Meeting bi-weekly, the committee identified math as one area greatly in need of attention. This committee enabled a cross-section of faculty and staff from different areas in the college to meet regularly to discuss problems and to brainstorm solutions, workshop topics, funding sources, and resources.

TRIDENT TECHNICAL COLLEGE
P.O. BOX 10367
Charleston, South Carolina 29411
803/572-6111
Susan Duchon, Site Director

The only field test site to have a previous NTO program, Trident Tech focused on black women, since they had not been successfully reached before. Early on, the site director identified a lack of transportation as a major barrier. Most of the women lived in downtown Charleston or in outlying rural areas, while the NTO programs were located at a campus several miles away. Few women had cars, and public transportation was inadequate. Past attempts had been made to remedy the situation, but the problem seemed insurmountable. The site director repeatedly raised the issue with upper-level administrators and gathered suppport from other staff members. With the commitment of the school's president, the transportation problem has now been solved by means of a shuttle bus.

Another major problem was that women, frequently "bottlenecked" in developmental studies courses, rarely considered NTO as an option. Some of the traditionally female programs they were preparing for had stringent entry requirements and others had a limited number of openings. The site director eased the problem by improving communication and coordination between the downtown campus developmental studies program and NTO instructors at the North campus.

The program concentrated on in-house recruiting, using presentations to developmental studies classes, a widely publicized Technology Discovery Week, role model panels, and hands-on tryouts. Additionally, an active support group was set up for the potential and enrolled NTO women.

Thirty-one black women enrolled in NTO training in industrial and engineering technology, an increase of 86% over the previous year.

WAUKESHA COUNTY TECHNICAL INSTITUTE
800 Main Street
Pewaukee, Wisconsin 53072
414/548-5578
Judy A. Trombley, Site Director

The Women's Development Center at this school had been focusing on NTO for several years before the field test program began, but staff members were not satisfied with the results. "Think Non-Traditional" (TNT) targeted occupations which the site director had identified as labor-short in her labor market survey at the beginning of the program. The program featured several series of exploratory workshops, which included role model panels, hands-on tryouts, and industry tours. Registration for the non-credit course was limited to 22 to ensure a close, supportive atmosphere for the women. At the conclusion of the series, the site director held individual exit interviews to provide occupational counseling and arrange for needed support services.

Extensive support services were provided: a support group, counseling, workshops, and improved coordination with the developmental studies department. A notable aspect of this program was the full participation and cooperation of instructors, academic and occupational counselors, and other staff, which the site director achieved informally through frequent meetings and conversations.

Thirty-two women, out of the 85 who took the TNT courses, enrolled in drafting, electronics, office equipment repair, and appliance servicing. Four other women were placed in NTO jobs, and two others were accepted for apprenticeships.

ATTACHMENT D

The Nuts and Bolts of NTO

and

Time for a Change

Covers, Title Pages, and Tables of Contents

THE NUTS AND BOLTS OF NTO:

A Handbook for Recruitment, Training, Support Services, and Placement of Women in Nontraditional Occupations

by

Jo Shuchat, Project Director

with

Genii Guinier and Aileen Douglas
Project Associates

The Women's Outreach Project

1981

Technical Education Research Centers

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Cambridge, Massachusetts 02138
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TIME FOR A CHANGE:

A WOMAN'S GUIDE TO NONTRADITIONAL OCCUPATIONS

by

Constance Drake Cauley

Developed by

ELLIS ASSOCIATES, INC.
5822 East 58th Street South
Tulsa, Oklahoma 74135

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